CHAPTER 90: CRITICAL AREAS UPDATE
APRIL 28, 2016

PLANNING COMMISSION STUDY SESSION

AGENDA

Policy discussions on:

- Follow-up on Wetland Buffer Standards
- Fish and Wildlife Conservation Habitat Areas
- Buffers for Daylighted Streams or other Modified Streams
- Maximum Development Potential
- Off-site Mitigation Policy

BACKGROUND – BUFFERS & NONCONFORMANCES

- Existing structures and improvements in a buffer or setback not affected by new regulations - "grandfathered" in
- Existing or proposed structures and improvements not in a buffer or setback not affected by new regulations
- New structures, enlargements of existing structures, or new landscaping with non-native vegetation would be restricted if located in a buffer
- Regulations must meet accepted Best Available Science (BAS) under GMA
- City does have some flexibility with setbacks from buffers, minor improvements in buffer, off-site mitigation, and nonconformances

CURRENT BUFFER APPROACH FOR WETLANDS AND STREAMS

- Established Buffer Standard
- Allow reductions of degraded buffers up to 1/3 with enhancement through critical area permit
- Win-win:
  - Development objectives achieved, but does require critical area permit
  - Community gets net improvement in wetland/stream functions & values
- **2035 Comprehensive Plan:**

  Policy E-1.3: Manage the natural and built environments to achieve no net loss of the functions and values of each drainage basin; and proactively enhance and restore functions, values, and features

PREVIOUS DISCUSSION ON WETLAND BUFFERS WIDTH

Current wetland buffers in KZC 90

Wetland Type	Primary Basin	Secondary Basin
1	100’	75’
2	75’	50’
3	50’	25’

Current wetland buffers in SMP

Wetland Category	Range of Buffer widths based on habitat score (feet)
I: Bogs	215
I: All others	125-215
II	100-200
III	75-125
IV	50

- ***Previous staff recommendation:*** *Table 1 Degraded buffer width standard with option to reduce to Table 2 Well Vegetated buffer through replanting.*

Table 1. Degraded Buffer Standard (Ecology BAS): wider buffer with option to reduce & average with mitigation

Wetland Type	Buffer width (in ft.) baaed on habitat score 3-4	5	6-7	8-9
I: Bogs	--	250	--	300
I: All others	100	140	220	300
II	100	140	220	300
III	80	140	220	300
IV	55	55	55	55

Table 2. Well Vegetated Functioning Buffer Standard (Ecology BAS): narrow buffer with option to average but not reduce entire buffer width

Wetland Type	Buffer width (in ft.) baaed on habitat score 3-4	5	6-7	8-9
I: Bogs	--	190	--	225
I: All others	75	105	165	225
II	75	105	165	225
III	60	105	165	225
IV	40	40	40	40

WHEN OTHER CITIES REQUIRE BUFFERS TO BE WIDENED

Other cities may require buffers to be increased for the following reasons (from Ecology model ordinance):

1. Geologically hazardous areas
2. Floodplain areas
3. Endangered, threatened or sensitive habitat areas based on the federal and state listings
4. A critical area that has a unique circumstance (such as a combination of 1-3 above) or to maintain the value of the wetland.

- Kenmore and Redmond: so far no such situation that required wider buffer
- Renton: Yes – one development that had a stream
- Woodinville: just adopted so no permits yet under new code

NEW RECOMMENDATION FOR WETLAND BUFFER STANDARD

Recommended Wetland Buffer Width
(Ecology BAS – narrow buffer)

Wetland Type	Buffer width (in ft.) baaed on habitat score 3-4	5	6-7	8-9
I: Bogs	190	--	--	225
I: All others	75	105	165	225
II	75	105	165	225
III	60	105	165	225
IV	40	40	40	40

Other local cities:

- **Woodinville: same standard**
- **Redmond: slightly smaller habit 5 score but much larger 3-4 and 8-9 habitat scores**
- **Renton: larger in one habitat score and smaller in another score**
- **Other cities with old rating system: very similar ranges**

Recommended Approach (Ecology BAS):

- ❑ **Provide buffer width.**
- ❑ **Meet vegetative standard.**
- ❑ **Implement 9 measures to minimize impacts.**
- ❑ **Option of buffer averaging by reducing one area down to 25% of buffer width while increasing other area so that total buffer area is provided** (provides development flexibility).
- ❑ **Option of not meeting vegetative standard and 9 minimizing standard by increasing buffer width by 33%** (provides choice to not plant or meet minimizing standards).
- ❑ **No buffer reduction permit required.**

PREVIOUS DISCUSSION ON STREAM BUFFER WIDTH (BAS)

- Buffer Widths

Current Stream Buffers in KZC 90

Stream Class	Buffer width for streams in primary basin (feet)	Buffer width for streams in secondary basin (feet)
A	75	N/A
B	60	50
C	35	25

Current Stream Buffers applicable to annexation area in SMP

Stream Type	Buffer width (feet)
F	115
N	65
O (Other)	25

Table 1 Degraded Stream Buffer Standard (wider buffer: reduction and averaging allowed)

Stream Type	Buffer Width
F	115 feet
Np	65 feet
Ns	50 feet

Table 2 Functioning Stream Buffer Standard (narrower buffer: averaging allowed but no reduction)

Stream Type	Buffer Width
F	100 feet
Np	50 feet
Ns	50 feet

- ***Previous staff recommendation:*** *Table 1 Degraded buffer width standard with option to reduce to Table 2 Well Vegetated buffer through replanting.*

NEW RECOMMENDATION FOR STREAM BUFFER STANDARD

Recommended Stream Buffer Width (Ecology BAS)

Stream Type	Buffer Width
F (contain fish)	100 feet
Np (no fish – year round)	50 feet
Ns (no fish – seasonal)	50 feet

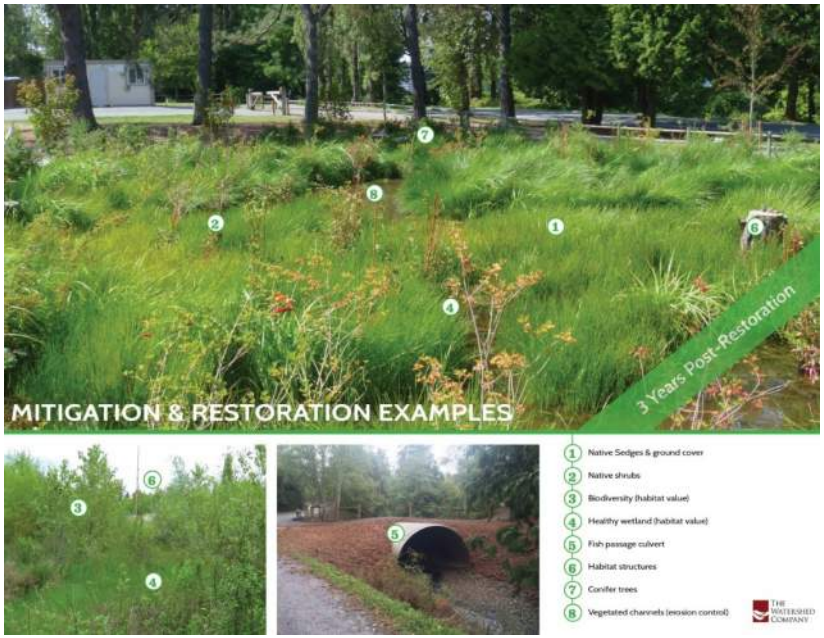
Other local cities:

- F Stream: Bellevue, Bothell, Kenmore, Federal Way - same as above. Redmond, Sammamish, Woodinville and King County – wider buffer.
- Np Stream: Bellevue, Bothell, Kenmore, Federal Way – same as above. Six other jurisdictions, including Redmond and Woodinville – wider buffer.
- Ns Stream: Woodinville, Sammamish and Bothell – same as above. Six other jurisdictions – narrower buffer.

Recommended Approach (Ecology BAS):

- ❑ **Provide buffer width.**
- ❑ **Meet vegetative standard.**
- ❑ **Implement 9 measures to minimize impacts.**
- ❑ **Option of buffer averaging by reducing one area down to 25% of buffer width while increasing other area so that total buffer area is provided** (provides development flexibility).
- ❑ **Option of not meeting vegetative standard and 9 minimizing standard by increasing buffer width by 33%** (provides choice to not plant or meet minimizing standards).
- ❑ **No buffer averaging or reduction permit required.**

VEGETATIVE STANDARD



Vegetative Standard

- Native cover of at least 80% on average throughout the buffer area with 2 out of 3 of the following strata of native plant species composing of at least 20% areal cover:
  - Multi-age forest canopy (combination of existing and new vegetation)
  - Shrubs
  - Woody groundcover or unmowed herbaceous groundcover
- Less than 10% noxious weeds cover using King County weed list (require removal of knotweed - very invasive)
- At least three native species each making up a minimum of 10% cover (for diversity)
- Removal of lawn (source of fertilizers, fecal coliform from pets and herbicides detrimental to wetlands and streams)

➢ **Allow alternative plan if needed based on criteria**

NINE MEASURES TO MINIMIZE IMPACTS (ECOLOGY BAS)

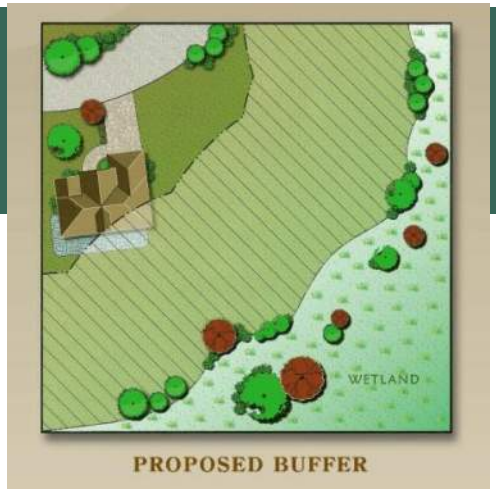
Disturbance	Required Measures to Minimize Impacts
Lights	• Direct lights away from wetland
Noise	• Locate outdoor activity that generates noise away from wetland • If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source
Toxic runoff	• Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered • Establish covenants limiting use of pesticides within 150 feet of wetland • Apply integrated pest management
Stormwater runoff	• Retrofit stormwater detention and treatment for roads and existing development adjacent to the site • Prevent channelized flow from lawns that directly enters the buffer • Use Low Intensity Development techniques (per Puget Sound Action Team publication on Low Impact Development techniques)
Change in water regime	• Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns
Pets and human disturbance	• Use fencing OR plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion • Place wetland and its buffer in a separate tract or protect with a conservation easement
Dust	• Use best management practices to control dust
Disruption of corridors or connections	• Maintain connections to offsite areas that are undisturbed • Restore corridors or connections to offsite habitats by replanting

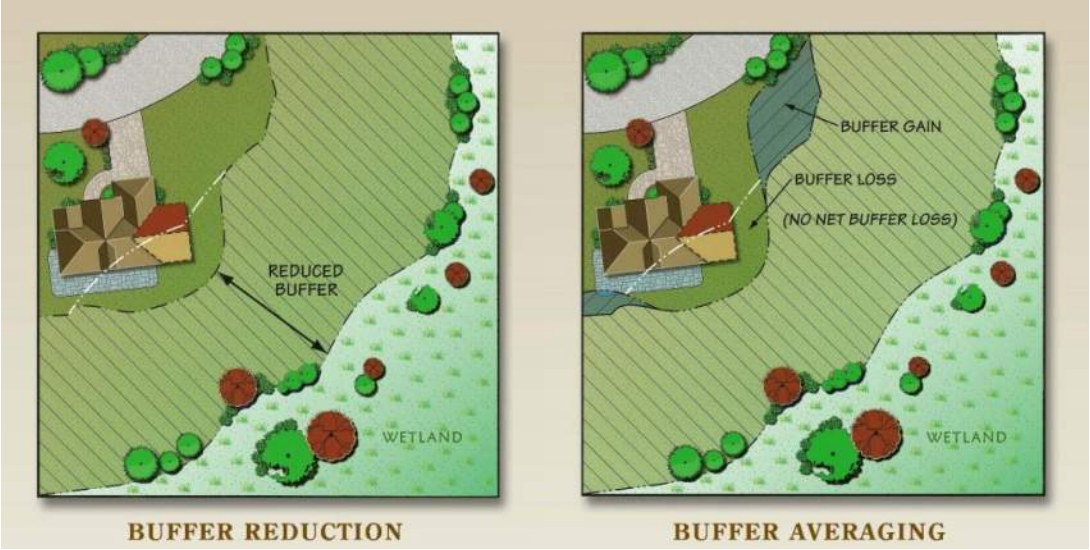
BUFFER AVERAGING

- **Buffer Averaging an Option**
  - Varying buffer width with one area reduce down to 25% of standard while other area made wider with enhancement so that total buffer area still provided

- **Buffer Reduction Not an Option**
  - No buffer reduction option with narrow buffer width standard

- Other local cities: most allow buffer averaging. Only a few allow overall reduction





ADVANTAGES TO BUFFER WIDTH APPROACH

Advantage of the Approach

- A simple set of regulations
- Number of new nonconforming structures will be less with the one narrow width buffer option
- Current Chapter 90 requires a **buffer reduction permit** to have a smaller buffer in exchange for planting native vegetation.
  - Time and cost of buffer reduction permit.
  - Public can challenge permit as a way to challenge the project.
  - Considerable staff time. Many permits.

Critical Area Report and Vegetation Requirement Not New for Property Owners

- Critical Area report and review will still be required to determine type of wetland or stream and review condition of buffer vegetation
- Almost all property owners and developers revegetate buffer now to receive buffer reduction so not a new requirement

RECOMMENDATION FOR WETLAND AND STREAM BUFFER STANDARDS

Staff Recommendation:

- Use narrow buffer standards
- Allow averaging of buffer width
- Require buffer to meet minimum vegetative standard
- Require implementation of 9 measures to minimize impact
- Provide option to not vegetate or implement minimizing measures by increasing buffer by 33%

Does the Commission agree?

FISH AND WILDLIFE HABITAT CONSERVATION AREAS (GMA)

- **Federally endangered, threatened or sensitive species** as determined by U.S Fish and Wildlife Services and National Marine Fisheries.

- **State designed endangered, threatened and sensitive species** as identified by Washington Department of Fish and Wildlife (WDFW).

- **Habitat and Species of Local Importance** as identified by a local jurisdiction or nominated by an individual or group.

ENDANGERED, THREATENED OR SENSITIVE SPECIES

- Under GMA must protect fish and wildlife habitat conservation areas
- Management plans must be addressed in critical area reports and implemented
  - Buffer zone
  - Preservation of vegetation and/or habitat features
  - Limit access to habitat area, including fencing
  - Seasonal restrictions of construction activities
  - Periodic review of mitigation activities
  - Performance bond to ensure completion and mitigation of success

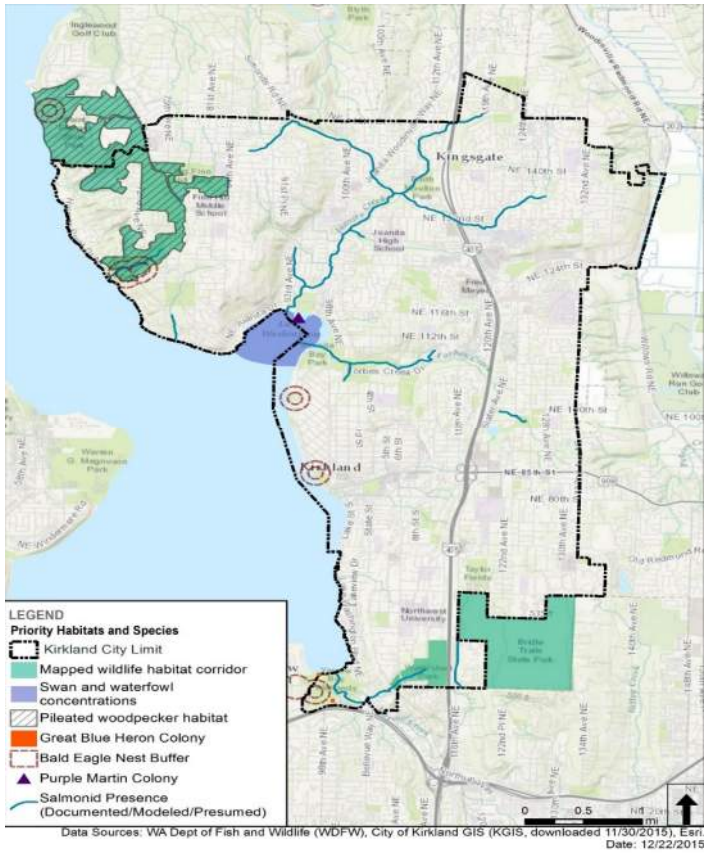
ENDANGERED, THREATENED OR SENSITIVE SPECIES

- Eagles are sensitive species and are located in various places along the shoreline Kirkland
- Chinook Salmon and Steelhead are threatened species that may occur in several of Kirkland

- All other local jurisdictions have regulations that address endangered, threatened and sensitive species, and reference state and federal management plans

Staff recommendation: Regulate these species by referencing state and federal management plans as mandated by GMA

Does the Commission agree?



SPECIES OF LOCAL IMPORTANCE

GMA requires listing of species of **local importance** or at least have a nomination process

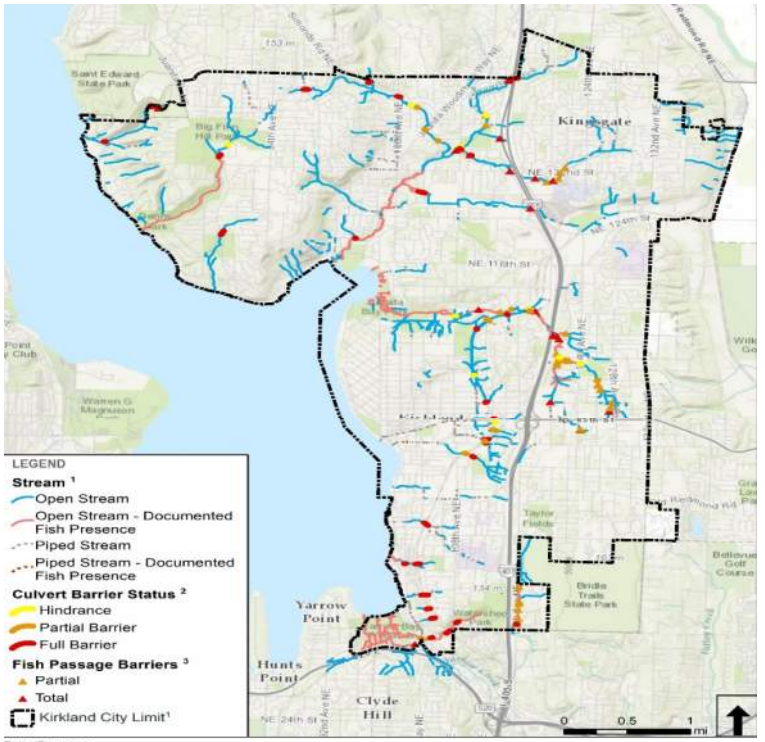
Kirkland's Potential Species of Importance are (see BAS report):

Fish:

- Coho salmon (federal species of concern)
- Sockeye/kokanee salmon (state concern status)
- Cutthroat trout (priority species, but no other state or federal status)

Priority Species:

- Pileated Woodpecker (candidate for priority species); habitat located in Finn Hill
- Great Blue Heron (monitor for priority species); habitat located in Yarrow Bay Wetland Park
- Purple Martin (candidate for priority species); habitat located in Juanita Bay (only one mapped occurrence)
- Trumpeter Swan (no state or federal status); habitat located in Juanita Bay



Data Sources:
1. City of Kirkland GIS, downloaded 11/30/2015.
2. The Watershed Company. August 2014. Fish Passage at City of Kirkland Road and Trail Stream Culverts-Preliminary Assessments.
3. Washington Department of Fish and Wildlife. July 2015. Fish Passage Barrier Inventory.
Service layer source: Esri

Date: 12/11/2015

SPECIES OF LOCAL IMPORTANCE: LISTING SPECIES

- **Staff Recommendation:** to protect local fish and priority species, list the 3 fish and the Pileated Woodpecker and Great Blue Heron as **species of local importance**.
  - Note that there is no need to include eagles, chinook salmon or steelhead on this list since they will be protected under the City's regulations for endangered, threatened or sensitive species.

  Implications:
  - Management plans from WDFW would need to be implemented for projects within their habitat.
  - For the fish, stream and wetland buffers will be sufficient.
  - For wildlife habitat, in some cases additional buffer or other measures may be required beyond the wetland and stream buffers.

- Redmond (1), Bellevue (23) and Woodinville (20) all have a list of local species
- Kenmore and Kent specifically regulate certain species

Does the Commission agree?

SPECIES OF LOCAL IMPORTANCE: NOMINATION PROCESS

- **Staff Recommendation:** provide a nomination process with criteria that documents why the species should have local protection.
  - Process: Use Code Amendment process to add species to Chapter 90 if approved. Potentially develop a simpler review process for the nomination and consideration than for current code amendments.
- Redmond, Bellevue and Woodinville all have nomination process with criteria.

Does the Commission agree?

BUFFERS FOR STREAM DAYLIGHTING

Streams

- City encourages removal of stream from culvert and then daylighting the stream
- Applicant may want to modify streams to stop erosion or move a stream to make better use of their property

- Requirements for buffers and agreement from adjacent property owners prevent daylighting and other modifications
- WDFW will consider reasonable buffer widths for these situations on a case by case basis
- Adjacent properties should be exempt from wider buffers due to daylighting or necessary modifications

Staff Recommendation: Determine buffer widths for these stream modifications on a case by case basis. Do not require increased buffer widths on adjacent properties due to modifications.

Does the Commission agree?

MAXIMUM DEVELOPMENT POTENTIAL

- The Maximum Development Potential (MDP) formula establishes the maximum potential number of dwelling units on a site that contains sensitive areas or their buffers.
- MDP reduces density otherwise allowed in the underlying zoning district to preserve and protect the sensitive area.
- Existing Subdivision and Zoning regulations may be applied to the MDP base dwelling unit count to increase the potential number of lots.
  - Size, lot averaging, small lot single-family, and low impact development subdivision flexibility standards
  - Cottage development and LID zoning regulations

Staff Recommendation: Continue practice and clarify that base density can potentially be increased utilizing existing Subdivision and Zoning provisions.

Does the Commission agree?

MAXIMUM DEVELOPMENT POTENTIAL

Dimensional Reductions

Staff Recommendation: Offset loss of development potential resulting from larger buffer widths by reducing dimensional standards:

- Minimum required yards
  - Zero lot line for interior lot lines to achieve clustering between units
  - Front – 10 feet
  - Side and rear - 5 feet
- Minimum parking pad dimensions
  - Width - 8.5 feet per required stall
  - Depth - 18.5 feet per required stall
- Tandem parking where stalls are shared by the same dwelling unit

Bellevue and Woodinville allow dimensional reductions outright.

Does the Commission agree?

OFF SITE WETLAND MITIGATION

3rd Party Mitigation

- Locating mitigation sites to compensate for wetland loss or impacts inside Kirkland city limits often not achievable.
- BAS supports allowing third-party responsible mitigation programs outside Kirkland city limits in Kirkland's watershed:
  - Wetland banks (applicant pays into program/operated by private parties or non-profits /oversight by public agencies/mitigation implemented mostly in advance of project)
  - In lieu fee (applicant pays into program/ sponsored by public agency or jurisdiction /oversight by public agencies/mitigation implemented concurrent or post project)

OFF SITE WETLAND MITIGATION

Advance Mitigation

- BAS also supports applicant responsible Advance Mitigation within Kirkland's watershed.
  - Advantages:
    - No temporal loss of wetland functions
    - May cost less than purchasing credits in third-party programs in the future, since land costs escalate over time
    - Potential City owned sites: Forbes Creek and Juanita Bay wetlands
  - Disadvantages:
    - City must create and administer approach to calculate and account for mitigation for over time
    - Relies on City Council funding and budgeting for public site acquisition, permitting, design and construction in advance of the need
- Bellevue allows Advance mitigation for City park projects only. Not codified in other cities surveyed.

Staff Recommendation: Allow advance mitigation option for public projects only, as interim step before making it available to other applicants, to understand the complexity of administration.

Does the Commission agree?

OFF SITE WETLAND MITIGATION

Prioritization of Compensatory Mitigation

- BAS recognizes that mitigation location should be prioritized dependent on which site provides the highest ecological benefits:
  - Small degraded wetland mitigation may be more sustainable if located within larger watershed (Cedar and Sammamish River basins).
  - Wetlands that serve complex habitat functions, maintain water quality, or manage hydrology to limit localized flooding should be mitigated on site or within the City.
- BAS acknowledges that in-kind mitigation (replacing like function and value of wetland loss) is preferred.
- Other jurisdictions prioritize location and type of compensatory mitigation. Redmond limits to within their jurisdiction.

Staff Recommendation: Prioritize mitigation location and type:

- On-site in kind
- Off-site in City in-kind
- Off-site within watershed in-kind

Does the Commission agree?

NEXT STEPS

- May 23, 2016: Houghton Community Council reviews direction from the Planning Commission on key issues
- May 26, 2016 (tentative): Planning Commission reviews preliminary draft of Chapter 90.
- June 13, 2016: Council Planning and Economic Development Committee briefing
- June 21, 2016: Council study session
- June 23 or July 14 (tentative): public hearing